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Maxbotix Ultrasonic Rangefinder - HRLV-EZ0 - HRLV-EZ0
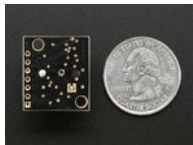
PRODUCT ID: 983

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DESCRIPTION

TECHNICAL DETAILS

DESCRIPTION

The HRLV-MaxSonar-EZ sensor line is the most cost-effective solution for applications where precision range-finding, low-voltage operation, space saving, and low-cost are needed.

The HRLV-MaxSonar-EZ sensor line provides high accuracy and high resolution ultrasonic proximity detection and ranging in air, in a package less than one cubic inch. This sensor line features 1mm resolution, target-size and operating-voltage compensation for improved accuracy, superior rejection of outside noise sources, internal speed-of-sound temperature compensation and optional external speed-of-sound temperature compensation. This ultrasonic sensor detects objects from 1mm to 5meters, senses range to objects from 30cm to 5meters, with large objects closer than 30cm typically reported as 30cm. The interface output formats are pulse width, analog voltage, and serial digital in either RS232 or TTL. Factory calibration is standard.

A good sensor for when a Sharp IR distance sensor won't cut it. For example of using this with an Arduino, see the Halloween Pumpkin project.

HRLV-EZ0 Data Sheet / Product Information Guide is available here. **By default this sensor outputs RS-232 logic level data, to use it in TTL logic mode, solder closed the square jumper on the back.**

MB1003

HRLV-MaxSonar®-EZ0™ Beam Pattern

Sample results for measured beam pattern are shown on a 30-cm grid. The detection pattern is shown for dowels of varying diameters that are placed in front of the sensor.
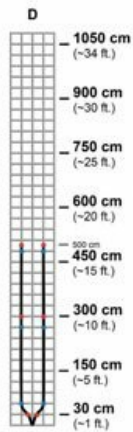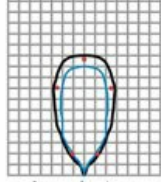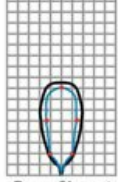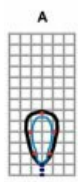A 6.1-mm (0.25-inch) diameter dowel   D 11-inch wide board moved left to right with
B 2.54-cm (1-inch) diameter dowel   the board parallel to the front sensor face.
C 8.89-cm (3.5-inch) diameter dowel   This shows the sensor's range capability.

Note: For people detection the pattern typically falls between charts A and B.

- - **Partial Detection**
— **5.0 V**
● **3.3 V**
— **2.7 V**

Beam Characteristics are Approximate

1050 cm (~34 ft.)
900 cm (~30 ft.)
750 cm (~25 ft.)
600 cm (~20 ft.)
500 cm
450 cm (~15 ft.)
300 cm (~10 ft.)
150 cm (~5 ft.)
30 cm (~1 ft.)

The different HRLV models have different beam width patterns, check this image for a comparison of all the HRLV model beam patterns. If you don't need high sensitivity, or want a longer range, check out the LV models - They are meant for up to 6.5 meter distances
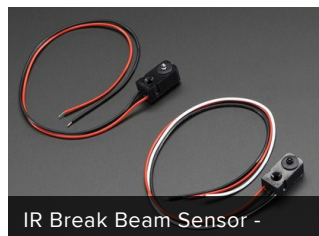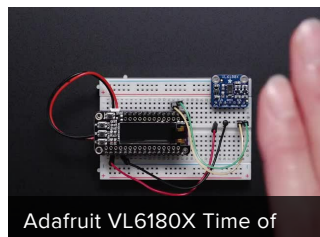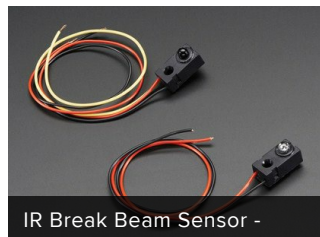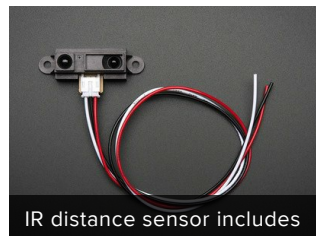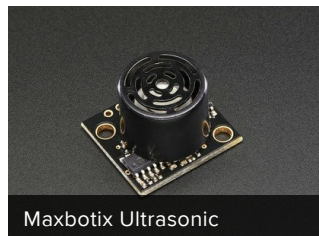

TECHNICAL DETAILS

Dimensions:

- Length: 15.52mm/0.61in
- Width: 22.36mm/0.88in
- Height: 20.0mm/0.79in
- Weight: 4.23g/0.15oz

For product support for all Maxbotix products, click here!

✔ RoHS

MAY WE ALSO SUGGEST...

Maxbotix Ultrasonic	Maxbotix Ultrasonic	IR distance sensor includes
IR Break Beam Sensor -	Maxbotix Ultrasonic	Maxbotix Ultrasonic
Adafruit VL6180X Time of	Maxbotix Ultrasonic	Maxbotix Ultrasonic
Adafruit VL53L0X Time of	IR Break Beam Sensor -	Maxbotix Ultrasonic

"You're only given one little spark of madness. You mustn't lose it" - Robin Williams

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